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Financial Integration
and
National Economic Policy

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Peter Albin: "The agents in the model have a model of the model."

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Preliminary; footnotes incomplete and requires tightening.

I Introduction:

We begin with main theorem of the financial instability hypothesis: "The path that an unconstrained capitalist economy, with a sophisticated, complex and ever evolving financial system generates exhibits periods of tranquil behavior and periods of turbulent and even chaotic behavior. Conditions conducive to turbulent and chaotic behavior emerge over a tranquil period as a result of the self-seeking behavior of the diverse units that make up a capitalist economy. Thus episodes of turbulent and chaotic behavior are endogenous phenomena in capitalist economies. Turbulent and chaotic behavior can take the form of interactive inflations, speculative binges or deep interactive deflations. Furthermore as these processes take place they seem to gain momentum. Just as there seems to be no end to the endogenously determined chaotic behavior, the self organizing properties of the complex system leads to the emergence of a new tranquil regime. This new tranquility can be at low levels of economic activity: stagnation is likely to characterize the tranquility that follows turbulence. In time the self seeking behavior of the diverse units will lead to a burst of speculation and inflation, followed by another regime characterized by incoherent behavior. This succession of regimes has two properties: "The more things change the more they remain the same." and "One can never step in the same river twice."

The financial instability hypothesis is built upon The General Theory of Keynes, which it takes to be misnamed: The General Theory is viewed as A Special Theory of a Capitalist

Economy. The observation that Capitalist economies are characterized by two quite different sets of prices, one of current output and the second of capital assets, is the foundation of the research program of the financial instability hypothesis.¹ The analytic core of the financial instability hypothesis is the development of a model of investment under capitalist conditions in which the pace of investment depends upon the relation between these two price levels, the extent of internal finance and the way financial relations and markets behave. There are two interfaces between finance and the investment process. Financial markets enter into the determination of the price level of capital assets and the determination of the desired leveraging ratios for investments and the holding of capital.

These two price levels (one can be taken to be the consumer price index (the C P I) and the other can be taken to be a price level of equities (the Dow-Jones) reflect quite different facets of the economy. They vary one from the other, sometimes mildly and sometimes radically, and their gyrations can transform an initially mild inflation, speculation or deflation into a seemingly never ending incoherent behavior of the economy. As a result of the complexity inherent in a financially sophisticated capitalist economy, with its two price levels, complex of financial institutions, and multiple interfaces between financial, labor and output markets and the flows of incomes, the Smithian assertion, that each agent, guided only by self interest as it

1. Two post General Theory expositions by Keynes' of the substance of The General Theory, which clearly point out the two price level character of the theory, are "The General Theory of Employment," Quarterly Journal of Economics, (1937) and "The Theory of the Rate of Interest," The Lessons of Monetary Experience: Essays in Honor of Irving Fisher, (1937) ed. A.D. Gayer.

perceives its self interest, is led, as if guided by an invisible hand, to do that which leads the economy to some "best" position, does not hold.²

Units with payment commitments denominated in a currency may react to shortfalls in cash flows in that currency in a manner which leads to further shortfalls in cash flows. Situations in which the decentralized pursuit of self interest transform initial unfavorable result into even worse results are easily constructed: market reactions can exacerbate rather than alleviate excess supplies. The metaphor of a benign invisible hand is not apt for a modern capitalist economy. The invisible hand of markets may lead to a malignant outcome.

If the prior for the analysis of economic policy is the financial instability hypothesis then the outlook on institutions and policy is different from that to which the Smithian invisible hand prior leads. Whereas Smithian theory holds that interventions in the workings of markets are almost always counterproductive, i.e. that policy interventions exacerbate rather than alleviate initial disequilibriums, the financial instability hypothesis holds that policy interventions and institutional constraints are necessary if endogenously generated

2. The question of whether decentralized markets produce order, anarchy or sometimes one or the other is a critical question in economic theory. For a summary of the present state of general equilibrium theory see Bruna Ingrau and Giorgio Israel, *The Invisible Hand* MIT Press 1919.

The general conclusion of Ingrau and Israel is that uniqueness and stability of a general equilibrium has not been shown and the proof of the existence of a general equilibrium for an economy that exists in calender time and allows for production depends upon the assumption of perfect foresight. These negative assessments of the substance of General Equilibrium theory hold even though General Equilibrium theory has not tackled the problems that enter into economic analysis with the introduction of money, banking and the financing of investment and positions in capital assets.

thrusts towards incoherence are to be thwarted. If interventions and apt institutions are necessary to forestall incoherent behavior and to contain the tendency for market economies to sink into deep depressions, then the Smithian system cannot be the core of a useful economics. A useful economics must be able to identify institutions and usages which can abort processes that would lead to the socially and economically very costly incoherent behavior and identify institutions and interventions which can sustain a close approximation to full employment.

At the head of this article I cite Peter Albin's memorable phrase anent agents in the model having a model of the model. In our modern economies the agents in the model include policy makers. If orthodox economists, who believe in the validity and relevance of the Smithian proposition, are the advisors, then the policy advice will not reflect the possibility that the economy requires active interventions if it is not to generate periods of incoherent behavior. If a policy advisor accepts the financial instability hypothesis as a valid way of looking at the economy then his advice will look to the building of institutions which can contain or control the inherent instability of a capitalist economy.

II. Central banks as instability containing institutions

As a result of endogenous economic instability all capitalist countries have institutions and usages which intervene and dominate the natural behavior of markets in order to prevent either excessive speculations, run away inflations and debt

deflations. Central banks are such institutions: they were put in place, as institutions which constrain banking processes and act as lenders of last resort, in order to contain the tendency for economies with fully endogenous and unconstrained finance (money) to generate inflations, speculative frenzies and debt deflations.

Central banks both constrain financing behavior and, as lenders of last resort, contain the consequences of speculative binges. In particular, as lenders of last resort, central banks intervene to prevent the free fall of asset prices that can result when financial institutions are forced to try to make position by selling out position. Thus monetary policy has its roots in the imputation of the instability of capitalism to the existence of fractional reserve banking and the endogeniety of the money supply, asset price levels and output price levels which follow.

After the Federal Reserve and the other Central Banks failed to contain the debt deflation of 1929-33 the inadequacy of a Central Bank centered policy regime to contain the boom and bust character of capitalist development became evident. The genius of Keynes was to construct a system which legitimated the use of the fiscal powers of a modern nation state in conjunction with monetary interventions to smooth out the boom and bust character of the path through time of a capitalist economy with a sophisticated financial structure.

Thus the years after the second world war saw nation states use monetary and fiscal policy more or less effectively to sustain a closer approximation to full employment over a sustained period of time than had ever been achieved in prior capitalist epoches: furthermore the prosperity associated with this sustained full

employment was more widely distributed through the population than was true of prior periods of extended good times. The combination of big government and what Jan Kregel has called a big bank served the world well in the post war period. However what some have called the Golden Age of post World War II capitalism rested upon a hegemonic economic position of the United States.

III. Financial Integration.

The vast expansion in international trade over the past decades has resulted in the economies and financial systems of the world becoming more integrated than they ever were before. The rise in international trade has been accompanied with a huge expansion in international portfolio diversification and a rise in capital movements which both initiated and followed current payment balances. A underlying reason for this growth in trade and financial linkages is the revolution in transportation, communication and computation that has occurred under the influence of containerization, giant cargo planes and the new technologies of computing and communication.

The transportation, communication and computation revolution reduced the protection, due to costs of transporting and communicating, that a nation's producers had in its home market. This was of particular significance for the United States, whose geographic separation from Europe and Asia provided a large degree of natural protection under the old transportation and communication regime. The phenomenal growth in international trade and the equally phenomenal growth in the extent of international financial linkages means that the conventional

favorable view of the effect of international trade has to be reconsidered.

Communication and computation revolutions not only aided the growth of International trade they also removed barriers to international portfolio diversification. Portfolios of banks and various financial intermediaries increasingly were diversified internationally. Positions in foreign currencies and in assets denominated in foreign currencies give rise to a demand for instruments that can limit losses if currency movements became excessive: such a demand for protection against currency fluctuations was unnecessary in the days when gold content of the currencies determined the narrow band within which currencies fluctuated.

The tool for the analysis of a financially integrated international economy is the set of interrelated balance sheets of the units in the economy. Double entry book keeping means that every entry on a balance sheet has to be accompanied by an offsetting entry on the same balance sheet. In addition every financial entry has to have an opposite entry on some other balance sheet.

Furthermore every financial instrument on a balance sheet has an image on another balance sheet; one unit's asset is another unit's liability. The financial items in balance sheets are either means of payments as they stand, commitments to make payments or claims to payments. The values placed on items on a balance sheet are either a current valuation of a particular expected cash flow or a depreciated historical valuation. The historical valuation of an asset begins with the price paid for the asset as an investment output and adjusts to reflect

depreciation and transaction prices, as these assets are sold and bought.

In a pure unintermediated bill of exchange economy, the risk of outcomes of the essentially risky businesses and households which owe money are carried by those who own the bills: i.e. merchants and producers.

Bankers were invented , so to speak, to have superior knowledge of the likelihood of contracted payments not be forthcoming and superior wealth, so that they can fulfill pledges to the owners of their liabilities even when the assets they own fail to perform as the contract charges. Furthermore by owning and owing to many, bankers can exploit a "banker's law" which holds that only a small set of debtors will fail to live up to their commitments and all but a small set of creditors will want to move their money from a bank during any short time period. For these services bankers charge a fee. Merchants and producers willingly pay this fee, for they accept a small loss with certainty against a large contingent loss, i.e. bankers sell insurance.³

The liabilities on the balance sheet are commitments to make payments either on call, at a particular date or if specified conditions emerge. The essential banker's question to a unit whose liabilities it contemplates accepting is "What are you going to do to get the funds you are promising to pay." For firms the answer lies in the expected gross profit flows and the potential proceeds from the sale or pledging of assets and for households the answer lies in the expected wages, various types of transfer

3. M. Friedman and L J Savage, "The Utility Analysis of Choices Involving Risk" Journal of Political Economy Aug 1948 279-304.

payments and the sale or pledging of assets. For governments it is the expected tax revenues as well as the issuance of new debts to "pay off" maturing debts.

Bankers are the designated skeptic of a capitalist economy: the prospective borrowers or in general the prospective seekers after financing paint only rosy pictures of economic prospects. The banker is the agent of the economy who subjects the essential enthusiasm of an entrepreneur to a skeptical evaluation.

IV The Tiers Approach to Balance of payments and Exchange Rate Determination.

"Every liability of an economic unit - be it household, government or financial institution - and every instrument traded in a financial market must be supported by cash flows. These cash flows are derived from participation in productive activity that generates wages, profits and taxes.

The same requirement that cash flows support asset values holds for international indebtedness, the only difference being that the supporting cash flows may be derived from incomes denominated in one currency while the payments are denominated in another. 4

The opening of the question of cash flows supporting international liabilities throws new light on balance of payments problems and the dominance of financial factors in determining exchange rates. The balance of payments is determined by four types of cash flows: the payment commitments on debts, the balance of trade, long term capital movements and the short term capital movements. We can call these types tiers in the balance of payments and conceive of the items in the Balance of payments arranged in these tiers. As is evident the tiers are determined by different markets: Tier one is an inheritance from the past, tier two is the result of current trade in goods and services, tier three is the result of capital market behavior and tier four is the result of the international money markets and whether there exists an international "clearing currency" such as gold.

4. Hyman P. Minsky, Global Consequences of Financial Deregulation "The Marcus Wallenberg Papers on International Finance" Gary Clyde Hufbauer, General Editor, International Law Institute and School of Foreign Service, Georgetown University 1986 p.6 and "Financial Relations, the Balance of Payments and the Dollar Crises," Debt and The Less Developed Countries, ed. J Aronson (Boulder Colorado: Westwood Press 1979).

The short term capital movements are equilibrating factors which assure that a payments balance always balances. Under a gold standard these short term capital movements could take the form of gold movements. In a regime of floating exchanges short term capital movements can lead to changes in exchange rates: furthermore short term capital movements may be speculative movements lured by anticipated exchange rate changes.

As each period begins every agent has a prior commitment to make payments because of its debts: every firm, household, and government unit has payments to make on both interest and dividends account and on account of the principle of its debts coming due. We can think of a national state as a unit with a balance sheet and during each say quarter its external indebtedness, whether the debt be of the government, the country's banks or private units, mandates payments on account of both interest and principle. We will call the payments due on indebtedness the tier one of the balance of payments.

Similarly the nation's households, firms and government units engage in trade activity. This activity leads to a balance of trade surplus or deficit. We will call this tier two of the balance of payments.

Each period there are flotations of long term capital issues on the various internationally integrated exchanges, as well as the movement of capital from country to country by multinational firms. These transactions are tier three of the international exchanges. The fourth tier is a movement of short term bank assets or liabilities: under the gold standard this could take the form of a movement of specie.

In the 19th century heyday of the international gold standard with Britain as the dominant financial force, Great Britain ran a huge surplus on its international balance sheet payments account: Britain was creditor and banker to the world.⁵ Britain consistently ran a deficit on its current trading account: however the deficit was almost always smaller than its surplus on its balance sheet accounts. Thus the sum of the tier one and tier two accounts was almost always positive.

Britain was a main source of long term international capital movements. Its outflow during a year, say on account of the long term capital movement, was greater than the surplus on the sum of tier one and two. The balancing item was a growth of sterling balances of the rest of the world. Even as Britain was a net exporter of capital its short term indebtedness to the rest of the world grew: this short term indebtedness took the form of balances in London banks, money placed on the London money market and deposits at the Bank of England.

The short term sterling balances of the rest of the world were the working capital of the private banks and often were part of the reserve base of the creditor country's Central Bank. If these sterling balances became too great the exchange rate would move to a "gold" point and the Bank of England would lose gold. The Bank of England operated a thin reserve gold standard which meant that a movement of gold from the bank called for measures to halt and even reverse the flow. The Bank of England reacted to the outflow of gold by raising the bank rate. All short term rates rose with the bank rate which meant that underwriting costs

5. R. S. Sayers, Bank of England Operations, 1890-1914 (London: P.S. King and Sons, 1936)

rose and arbitrage among issues led to a rise in long rates. The rise in rates decreased the new long term issues that came to the market. This led to a fall in the tier three deficit. The surplus on tier one now dominated the total: the outflow of gold ceased and gold soon flowed back to the Bank of England.

The aphorism that a 6% bank rate would draw gold from the moon was validated, not by a change in the trade balance or in the relative incomes of Britain and the rest of the world but by capital and money market adjustments.

The basic lesson to be learned from the operations of the financially integrated gold standard of the 19th and early 20th century is that the country or countries that have a large net favorable cash flow because of their income from foreign assets must accommodate the needs of the debtors by making their currency available by running a trade deficit. Furthermore, if they still run a surplus on the sum of tier one and two they need to be a reliable source of long term capital. As eventually international indebtedness will be denominated in the currencies of the countries with large offshore assets they must also accept that their currency will become a reserve currency of their debtors, for it is convenient to hold liquid assets in the currency in which your debts are denominated.

V. Perverse Effects

We will first look at the adjustment process from the point of view of a country with a large deficit on tier one payments. If the net amount due each period on foreign indebtedness, i.e. the tier one deficit, is so large that in spite of a substantial

tier two surplus the balance over tiers one and two is negative a large short term capital movement will take place to the deficit country. (We ignore tier 3, long term capital, movements.) The piling up of the short term debt of such a deficit country in the banks and central banks of the world leads to pressures on the exchanges which leads to a fall in the exchange rate. The number of units of the debtors money that is required to fulfill unchanged obligations in the creditor's money increases. If the debt is private then the firms in the deficit country need to use a higher percentage of their gross cash flow to fulfill their obligations. The internal funds available to fund investment or to decrease indebtedness falls and with this the pace of investment in the economy diminishes: in particular gross profits fall.

If the debt is a government debt then either the tax revenue that is needed to meet obligations increases or the deficit increases in order to meet the payment commitments. The first is deflationary which increases the burden of private indebtedness and the second is inflationary, which offsets in all or in part the benefit to the trade account that is supposed to accrue because of the depreciation on the exchanges.

If the international capital position is in the form of equity positions or if it is in the form of debts denominated in the deficit countries currency then the pressure on the exchange rates will keep the debtor currency payments constant while decreasing the flow to the asset owners in the surplus country. Denominating international debts in the currency of the debtor country at least forces the creditor country to recognize that it

can lose from exchange rate depreciation by its indebted trading countries.

However in fact international indebtedness is normally denominated in the lenders currency or in a "strong" currency. This means that the exchange rate of the indebted country is under pressure: the terms of trade move against the indebted country.

Furthermore if there are fixed exchange rates, i.e. a gold standard or its equivalent rules, then the pressure from the exchanges will be felt in wage rates. The wage rate (cost structure) in the indebted country has to be low enough so that enough of the nut, which is due to the carrying costs of international indebtedness is made on the trade account so that the "financiers of the world" feel they can hazard more long term capital into the indebted economy. In this way the chronic deficit on the first two tiers does not result in an accumulation of short term indebtedness which can lead to pressure on the fixed exchange rates.

It is clear that international indebtedness benefits the inhabitants of the creditor country two ways. The first is that there is a transfer of profits from the debtor country to the creditor country. The second is that if the debtor country runs a tier one plus tier two deficit then the pressure on the exchanges will lead to chronic depreciations and declines in relative wages: for those who can afford it prices in the debtor country fall below purchasing power parity.

VI. Conclusion: The Need for International Responsibility.

The unique balance between a tier one surplus, a deficit in tier two which was not large enough to fully fund the tier one surplus, a serious long term capital movement so that the sum of

tiers one, two and three had the creditor country in deficit and a short term capital inflow to the creditor country. This short term balancing movement became the reserve base for countries on a sterling standard and transaction balances for central banks and commercial banks throughout the world. The center, Britain benefited from the system because of the capital income it earned and the jobs in finance of its citizens. Furthermore the "unrequited" exports of the debtor countries were accomplished by means of a relatively depressed wage unit in the debtor country.

The "benefits" from trade may well include the accumulation of international indebtedness, which leads to continuing pressure on the exchanges if the deficit on the combination of tier one and tier two is greater than what can be funded and what is wanted for international liquidity. The international trading and finance system requires that the deficit and surplus countries agree that the viability of a regime of open trade depends upon the ability of the system to generate a sufficient flow of funds from the substantial creditor countries so that the debtor countries can service their debts. This means that the creditor countries cannot run a surplus on tier one plus tier two that is greater than the amount of long term liabilities from the debtor country they are willing to support: furthermore at least some of the capital movement needs to take the form of equity investments and some needs to be denominated in the currency of the debtor.

In particular countries with a large position in international assets should not have policies or institutions which make them dependent on chronic surpluses in international trade. Creditor countries which protect their export surpluses are achieving their prosperity by beggaring their neighbor: by

making their neighbors poorer. Furthermore if a country with a substantial international asset position maintains an anti inflationary position which prevents its trading partners who are also its debtors from using monetary and fiscal measures to achieve an approximation to full employment it is also beggaring its neighbor.

International financial integration has obviously increased to an enormous extent in the two decades since the end of the Bretton Woods system. Some of the integration represents the volume of currency trades undertaken in efforts to contain exposure to currency fluctuations. The theory of the advocates argued that fluctuations would be small. In truth the swings in exchange rates have been very large: much too great to be explained on trade accounts. The wide swings are an effect of financial integration.

One corollary of financial integration is the need for national states to agree on the objectives of economic policy is . In the 1960's a trade off between the level of employment and price stability became part of standard economics. In today's index of objectives that Central Banks aim to achieve the weight of full employment is well nigh zero and that of containing inflation is well nigh one. This may well be an unfortunate weighting system. If the price of international financial integration is a regime of high unemployment and low growth then I expect that measures to establish greater autonomy in economic policy for the nation states will be on the political agenda.